

Page 1 of 1

All amounts are calculated in domestic currency.

All Vendors PO ID PO31065 Receipt Dates from 2/3/2016 to 2/3/2016

All Item ID/GL/WOs	All Rec. Employees	All Currencies

Grouped by Vendor ID

[illegible]

ARR JC 0 134157
B I L L O F L A D I N G
Ship From:
THYSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905 669 9444 Fax: 905-738-9033

No: PEC 975410
Ship Date 03Feb16 at 11:47 From PFW
Probill
Via VIM DELIVERY
FOB CONCORD
Frt PREPAID
Route 0- 0 Manifest
Vhcle Trailer
Slp STAN IVERS (905-532-1350)
Sold To: (20115)
DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7

Ship To: (1)
DART AEROSPACE
1270 ABERDEEN ST
HAWKESBURY, ON K6A 1K7
Tel: 613-632-9577 Fax: 613-632-1053

B I L L O F L A D I N G

1) Our Order PEC-888777- 1 Your PO # 31065

STAINLESS STEEL FLAT BAR 303CD
1.00" X 3.00" X 144.0000"

Heat Number Tag No
265169 495595

Quantity PCS Wt LBS
12 FT 1 125

MTR

2) Our Order PEC-888777- 2 Your PO # 31065
Part # ** USA Rel #

ALUMINUM SHEET 2024 -T3
.0400 Nom X 48.0000" X 144.0000"

Heat Number Tag No
142137B9 498154

Quantity PCS Wt LBS
48.00 SFT 1 28

MTR

3) Our Order PEC-888777- 3 Your PO # 31065
Part # *** USA Rel #

ALUMINUM SHEET 2024 -T3
.0640 Nom X 48.0000" X 144.0000"

Heat Number Tag No
158898B7 498064

Quantity PCS Wt LBS
96.00 SFT 2 87

MTR

TOTAL: Tags 3 PCS 4 LBS 240

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR
TO SHIPPING.

ATTN: CHANTAL/LINDA

** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **

Page: 1Continued

ALUMINIUM • LAITON • CUIVRE • PLASTIQUE • ACIER INOX
ALUMINUM • BRASS • COPPER • PLASTICS • STAINLESS

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION
TVQ/QST# 1017327981 TQ001 TPS/GST TVH/HST # 140223934 RT0001

DATE

B I L L O F L A D I N G

Ship From:
THYSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905 669 9444 Fax: 905-738-9033

No: PEC 975410
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Via VIM DELIVERY
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Frt PREPAID
Route 0- 0 Manifest
Vhcle Trailer
Slp STAN IVERS (905-532-1350)
Sold To: (20115)
DART AEROSPACE

Ship To: (1)
DART AEROSPACE

B I L L O F L A D I N G

==
** REFERENCED ON IT **

TOTAL 1 BAR, 2 SKIDS GW. 485 LBS

*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA
CONCORD, ONT.* *** 9:00 AM TO 4:00 PM ***

**** TEL. 800-926-2600 ****

* WE STOCK STAINLESS STEEL *

* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT *

***PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE
ADDED TO EVERY ORDER.***

Page: 2 Last

ALUMINIUM - LAITON - CUIVRE - PLASTIQUE - ACIER INOX
ALUMINUM - BRASS - COPPER - PLASTICS - STAINLESS

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

REÇU EN BONNE CONDITIONS / RECEIVED IN GOOD CONDITION
TVQ/QST# 1017327981 TQ001 TPS/GST TVH/HST # 140223934 RT0001

DATE

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 303
DATE: 16/02/04

PO / BATCH NO.: 31065/134157

MATERIAL CERT REC'D: yes
QUANTITY RECEIVED: 12.250'
QUANTITY INSPECTED: 12.250'
QUANTITY REJECTED: _____

THICKNESS ORDERED: 1.00X 3.00
THICKNESS RECEIVED: 1.00X 3.00
SHEET SIZE ORDERED: _____
SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	N	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: _____	SIGNED OFF BY: _____		
DATE: <u>16/02/04</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 2024T3
DATE: 06/02/04

PO / BATCH NO.: 31065/134157

MATERIAL CERT REC'D: yes
QUANTITY RECEIVED: 48 SA
QUANTITY INSPECTED: 48 SA
QUANTITY REJECTED: _____

THICKNESS ORDERED: .040"
THICKNESS RECEIVED: .040"
SHEET SIZE ORDERED: 4'X12'
SHEET SIZE RECEIVED: 4'X12'

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u>	SIGNED OFF BY: _____		
DATE: <u>16/02/04</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 2024T3
DATE: 16/02/04

PO / BATCH NO: 31045/134157

MATERIAL CERT REC'D: yes
QUANTITY RECEIVED: 965A
QUANTITY INSPECTED: 965A
QUANTITY REJECTED: _____

THICKNESS ORDERED: .063"
THICKNESS RECEIVED: .063"
SHEET SIZE ORDERED: 4' X 12'
SHEET SIZE RECEIVED: 4' X 12'

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	N	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL	<input checked="" type="radio"/> Y	N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u>	SIGNED OFF BY: _____		
DATE: <u>16/02/04</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4
Telephone number : 0039 (0) 444968211

Cliente / Basiste/Purchaser/Client
VALBRUNA STAINLESS INC.
2400 TAYLOR STREET WEST
46801-FORT WAYNE, IN 46801-US

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/manufacturer

Avviso di Spedizione: D-VI15011015
Lieferanweisung/Packing list/B.L.

Ordine nr: 44220 5400252171-R02
Bestell-/Your order/Commande

Certificato nr: MEST676041/2015/
Prüfung/FestVessel

Conferma ordine nr: EI15002082
Werkz./Our Order/Ref. nr.

Marchio di Fabbrica:
Zeichen des Lieferanten
Trade mark
Sigle de l'usine productrice

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Folgende des Testeur



Stato di fornitura: Hot rolled - Annealed Cold Drawn
Lieferzustand/Delivery state/Etat de livraison

Tipo di Elaborazione: E+AOD
Errechnungs-/Welding process/Mode d'elaboration

Specifiche:
Anforderungen / Requirements / Exigences
VSI 0 303 A,CF
AMS 5640 U TYPE1 A
ASTM A320 2011A B8F (1)
MIL-S-862 B/1 303

AISI 303
ASME SA320 2013 B8F (0)
ASTM A370 2014 .
QQ-S-764 B/2 303 A

AMS 5640 U S30300 A
ASTM A314 2008 S30300
ASTM A582 2012 S30300 A

(0) SECTION II PT.A 2013 EDITION
(1) Chemical analysis only.

(0) Chemical analysis only.

Qualità: T-303 BSREC00034 #5
Werkstoff/Grade/Qualität

Marca: AU188Z/P
Markenbezeichnung/Brand/Marke

Tolleranza: ASTM A484-14a TABLE 9
Toleranz/Allowance/Tolerance

Punzonatura: 303
Kennzeichnung/Marking/Markierung

DAS
14
9-89 16/02/04

Pos. nr. Pos. nr. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - in Abmessungen Dimension Dimension	Lunghezza - in Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Lot nr. Lot nr.
0020	Flat	3,0000 x 1,0000	146 / 146	265169		1.501	417806100

TEST ALLO STATO DI FORNITURA
Test on delivery condition Prüfung auf lieferbarem produkt test à l'état de fourniture Prueba sobre el material así como entregado

TEST	Proveita/Probes Speichen/Probes Lay diam/Gates Bore Diam. Dicks With Diam. Thickness Lay diam. Dicks	Posiz. Saggo Profilage Liquen Exposition	Snervamento Streckgrenze Yield Stress Limite élastique Rp 0,2%	Snervamento Streckgrenze Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm k.s.l.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Einziehung Reduction of area Striction RA %	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB
	Valori richiesti 1 Anforderungen/Required values Valeurs dimension	min max	-	-	-	-	-	-	140 255
A	2,5	68 L	70		101	37	53		231

TEST	min	max
A Grain size for ASTM E112		5

Mechanical properties according to ASTM A370.

1) L=longitudinale/längs, T=transversale/quer, Q=Tangenziale/tangentiel

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata/Heat Schmelze/Coulée	min - max 0,150	1,50 2,00	17,00 19,00	0,60	1,00	9,00 10,00	0,100	0,25 0,35	0,400	-	-	-	-
265169	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	Zr %		
	0,033	0,42	1,75	17,23	0,51	0,49	8,14	0,131	0,031	0,31	0,005		

Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Micro and macro etch test: OK
Reduction ratio = 15,9 : 1
Annealing temperature: 1940°F for 1 h/water.
Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind lt. Anlage erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été trouvé conforme aux exigences

Controllo antimescolanza: OK
Verwechslungsprüfung: spezialanalytisch durchgeführt
Antimixing testing performed: OK
Contrôle antimélange fait: r.a.s.

Controllo visivo e dimensionale: soddisfa le esigenze
Besichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional checks: satisfactory
Contrôle visuel et dimensionnel: satisfaisant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination
We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

Vicenza 16/04/15 VCCOCC (Mod. MCE2)	Il collaudatore di stabilimento / der Werksachverständiger / Works inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 2
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From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS CA LTD

Del.: 2404320726

CstAr

CstOr 272720

Wgt.: 125 LB

Date 01/21/2016

Tomas Sanchez

Acciaierie Vaibruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.I.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4
Telephon number : 0039 (0) 444968211

Cilente / Besteller/Purchaser/Cient
VALBRUNA STAINLESS INC.
2400 TAYLOR STREET WEST
46801-FORT WAYNE, IN 46801-US

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Item/Usine producer

Stato di fornitura: Hot rolled - Annealed Cold Drawn
Lieferzustand/Delivery state/Etat de livraison

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-VI15011015
Lieferanzeige/Packing list/B.L.

Ordine nr: 44220 5400252171-R02
Bestell/Your order/Commande

Tipo di Elaborazione: E+AOD
Erschmelzungsart/Melting process/Mode d'elaboration

Certificato nr: MEST676041/2015/
Prüfung/Test/Essai

Conferma ordine nr: EI15002082
Works/Our Order/Ref. nr.

Marchio di Fabbrica:
Zeichen des Lieferwerkes
Trade mark
Sigle de l'usine producer

Punzone del Collaudatore:
Stempel des Werkssachverständigen
Inspector's stamp/Peignon de l'assesseur



The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1, s. 4.3 by TUEV and LLOYD'S S
Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Vaibruna shall protect its rights and interests before any competent court, authority and jurisdiction.
The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Vaibruna SpA shall not be responsible for any improper use of the Products.

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VICENZA
BOLZANO
FABBRICA
2400 TAYLOR STREET WEST
46801-FORT WAYNE, IN 46801-US
Hot rolled - Annealed Cold Drawn
The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1, s. 4.3 by TUEV and LLOYD'S S
Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Vaibruna shall protect its rights and interests before any competent court, authority and jurisdiction.
The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Vaibruna SpA shall not be responsible for any improper use of the Products.

Vicenza, 16/04/15 V00008 (Mod. MCE2)	Il collaudatore di stabilimento / der Werkssachverständigen / Works Inspector / L'agent d'usine M. Rizzotto	Pagina - 2 di 2
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From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS CA LTD

CstAr

Wgt.: 125 LB

Del.: 2404320726

CstOr 272720

Date 01/21/2016

Tomas Sanchez

SHIP TO: COPPER & BRASS SALES 13338 ORDEN DRIVE BUILDING H SANTA FE SPRINGS, CA 90670
SOLD TO: COPPER & BRASS SALES ATTN: ACCOUNTS PAYABLE P.O. Box 5116 SOUTHFIELD, MI 48086

**KAISER
ALUMINUM**
Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

2

CERTIFIED TEST REPORT

Serial Number
4384452

CUSTOMER PO NUMBER: 5400265433	WORK PACKAGE:	CUSTOMER PART NUMBER: ALFLR01581	SHIP RUN/LOAD: 103273/5	GOV'T CONTRACT NUMBER:		
KAISER ORDER NO: 1197887	LINE ITEM: 1	SHIP DATE: 25-JUL-2015	ALLOY: 2024	CLAD: BARE	TEMPER: T3	PRODUCT DESCRIPTION: HT Flat Sheet
WEIGHT SHIPPED: 4095 LB	QUANTITY: 145 PCS EST.	TRUCK B/L #: 2055139	GUAGE: 0.0400 IN (1.0160 MM)	DIAMETER/WIDTH: 48.000 IN (1219.2 MM)	LENGTH: 144.000 IN (3657.6 MM)	

MHU 1907912: LOT 137818B1: 47 pieces;
MHU 1915086: LOT 142137B9: 98 pieces;

Certified Specifications

DAS
14
9-89 16/02/04

AMS 4037/RevQ
CMMP 019/RevD

AMS-QQ-A-250/4/RevB
CMMP 025/RevU

ASTM B 209/Rev14

Test Code: 1504

Test Results

Lot: 137818B1 Cast 825 Drop 15 Ingot 4 Melted in USA

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 2 (Min:Max)	65.6 : 66.7 (452 : 460)	44.0 : 44.3 (303 : 305)	17.1 : 18.7

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.07	0.19	4.4	0.58	1.4	0.01	0.12	0.02	0.01	0.01	TOT 0.06

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4384452

Lot: 142137B9 Cast 843 Drop 06 Ingot 4 Melted in USA

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 2 (Min:Max)	67.8 : 67.9 (467 : 468)	45.5 : 45.6 (314 : 314)	17.8 : 18.1

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.07	0.20	4.4	0.63	1.4	0.01	0.08	0.02	0.01	0.00	TOT 0.04

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024												
MIN(wt%)	0.00	0.00	3.8	0.30	1.2	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

DAS
14
9-89

16/02/04

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser), is ISO-9001:2008 AS9100C certified and hereby certifies that all material shipped under this order:

- * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements.
- * was melted in the United States of America or a qualifying country per DFARS 225.872 1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- * has been thermally processed in compliance with AMS 2772, where applicable.
- * is mercury free, within the limits of detection of ASTM E1251 (< = 1ppm).
- * is in compliance with RoHS 2, European Union Directive 2011/65/EU.
- * is in compliance with and regularly monitors any updates to the European Chemical Agency, ECHA, REACH regulations, (EC) n°1907 2006.
- * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.



JAMES HEMENWAY, LABORATORIES SUPERVISOR



INSPECTION CERTIFICATE



3

Certificate Type : EN 10204 / 3.1

Our Sales Order No. 100072 Invoice No. 1518110083 Certificate No. 1518-0001035
Customer Order No. 5400246301-R02 Invoice Date 25.05.2015 Date 28.05.2015

Customer Thyssenkrupp Materials Na
PO Box 5116
Southfield, MI 48066-5116
USA

Trade Mark

ASSL

Inspector's Mark

ASS1

Material Details Stainless Steel Round Bar Cold Drawn & Centerless Ground
Steel Grade 416 Shape Round Size 0.3125 inch
Heat No. SS-193 Tolerance $\pm 0.0015"$ Length of Bars 11-13 ft
Net Weight 3058.095 LBS Number of Bars 2 Melting Process EFAOD/MEMS.
Bundle No's AH-373, AH-390
Requirements AMS 5610N:2008 ASTM A 582:2012

Chemical Analysis %

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu								
Min.					0.150	12.000											
Max.	0.150	1.000	1.250	0.080	0.400	13.500	0.600	0.750	0.500								
Melt	0.100	0.360	1.130	0.030	0.250	12.300	0.120	0.200	0.120								

Mechanical Properties

	YS/(Rp 0.2%) (N/mm2) ASTM A 370:2014	UTS (N/mm2) ASTM A 370:2014	% Elongation. ASTM A 370:2014	% Reduction Area. ASTM A 370:2014	Hardness (BHN) ASTM A 370:2014	Charpy Impact V Notch (Longitudinal) (Joules)				
Min.						Temp. Deg	Result			
Max.					241	(C)	1	2	3	Avg.
Results	480.220	680.540	24.000	52.520	190.000					

Heat Treatment:

Annealed @ 850°C. Soaking for 7 hrs & furnace cooled.

Remarks:

- * Country Of Origin Of Goods - India
- * Free from Radioactivity - verified through Gamma Ray Spectrometer
- * No Mercury Contamination
- * Micro & Macro Test - Satisfactory
- * No welding has been performed on the material
- * Heat Treatment furnace calibrated as per AMS 2750E
- * Specimen Size for UTS - 12.50 mm
- * Visual & Dimensional Inspection - OK
- * Material Identification tested through X-ray based portable Spectrometer
- * RoHS Compliance

ASS/1

We confirm that the material is manufactured & supplied in accordance to the Purchase Order

QA Head/NDT Inspector
AMBICA STAINLESS STEEL LIMITED

Ambica Stainless Steel Limited

A-1-1, Wazirpur Industrial Area, New Delhi 110052, India Tel.: +91 (120) 4564585-88 Email: info@assl.co.in Web: www.ambicastainless.com CIN: U27106DL2004PLC131284

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS CA LTD

Del.: 2404331336

CstAr

CstOr 272863

Wgt.: 130 LB

Date 01/27/2016

Tomas Sanchez

KAISER ALUMINUM FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum
Trentwood Works
Spokane, WA 99215-5108
(800) 367-2586

CUSTOMER PO NUMBER: 5400277349-10		WORK PACKAGE:	CUSTOMER PART NUMBER: ALFLR01583-48	PRODUCT DESCRIPTION: HT Flat Sheet	
KAISER ORDER NUMBER: 1203761	LINE ITEM: 1	SHIP DATE: 11/24/2015	ALLOY: 2024	CLAD: BARE	TEMPER: T3
WEIGHT SHIPPED: 3298 LB	QUANTITY: 74 PCS EST.	B/L NUMBER: 2057196	GUAGE: 0.0630 IN	WIDTH: 48.000 IN	LENGTH: 144.000 IN
SHIP TO: COPPER & BRASS SALES 404 CENTURA COURT SPARTANBURG, SC 29303 US			SOLD TO: COPPER & BRASS SALES ATTN: ACCOUNTS PAYABLE P.O. Box 5116 SOUTHFIELD, MI 48086 US		

NHU 1944569: LOT 158898B7: 74 pieces

Certified Specifications

DAS
14
9-99 16/02/04

AMS 4037/RevD AMS-QQ-A-250/4/RevB ASTM B 209/Rev14 CMMP 019/RevD CMMP 025/RevU

Test Code: 1504

Test Results:

LOT: 158898B7 CAST: 889 DROP: 43 INGOT: 4

Melted in USA
(ASTM E8/B557)
(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T3	LT / 02 (Min:Max)	66.8 : 67.1 (461 : 463)	44.7 : 44.8 (308 : 309)	17.9 : 19.9

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.19	4.4	0.57	1.4	0.01	0.14	0.03	0.01	0.00	TOT 0.06

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
2024	MIN 0.00	0.00	3.8	0.30	1.2	0.00	0.00	0.00	0.00	0.00	MAX 0.05
	MAX 0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.05	TOT 0.15

Aluminum Remainder

Plant Serial: 4398482

Kaiser Order Number: 1203761

Line Item: 1

Page 1 of 2

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS CA LTD

Del.: 2404321240

CstAr

CstOr 272720

Wgt.: 87.091 LB

Date 01/21/2016

Thomas Sanchez

KAISER ALUMINUM FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

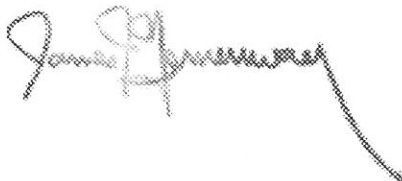
<http://Online.KaiserAluminum.com>

Kaiser Aluminum
Trentwood Works
Spokane, WA 99215-5108
(800) 367-2586

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC (Kaiser), is ISO-9001:2008/AS9100C certified and hereby certifies that all material shipped under this order: * has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. * was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content. * has been thermally processed in compliance with AMS 2772, where applicable. * is mercury free, within the limits of detection of ASTM E1251 (<1ppm). * is in compliance with RoHS 2, European Union Directive 2011/65/EU. * is in compliance with and regularly monitors any updates to the European Chemical Agency, ECHA, REACH regulations, (EC) n719C7/2006. * is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act. Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

JAMES HEMENWAY, LABORATORIES SUPERVISOR



Plant Serial: 4398482

Kaiser Order Number: 1203761

Line Item: 1

Page 2 of 2

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS CA LTD

Del.: 2404321240

CstAr

CstOr 272720

Wgt.: 87.091 LB

Date 01/21/2016





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO31065

Purchase Order Date 1/19/2016

PO Print Date 1/19/2016

Page Number 1 of 6

Order From :

VC-COP001

Ship To : DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"
TORONTO, ON M5W 5V8
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
JAN 18 2016

Contact Name

Vendor Phone 905 669 9444

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Terms

Net 30

Currency

CAD

Ship Acct:

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M303B1.000X03.000 MATERIAL: AISI 303 SS BAR AS PER ASTM A582 NOTE: AISI 304/316 NOT ACCEPTABLE	303 BAR 1" X 3'	1/29/2016 No 1/29/2016		12.00 f	\$64.66	\$775.92
Line Total:							\$775.92
2	M303R0.500 MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: AISI 304/316 NOT ACCEPTABLE	303 Round Bar 0.500"	1/22/2016 Yes 1/22/2016		12.00 f	\$2.92	\$35.00
Line Total:							\$35.00

PO Instructions: PEC ST-887509,
PEC ST-887888,
NOTE: FLAME CUT MATERIAL NOT ACCEPTABLE

Note:

1/19/2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31065**

Purchase Order Date 1/19/2016

PO Print Date 1/19/2016

Page Number 2 of 6

Order From : VC-COP001
THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"
TORONTO, ON M5W 5V8
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 905 669 9444

Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

3	M303R1.000 ✓	303 Round Bar 1.00	1/22/2016	12.00 ✓	\$8.40	\$100.84
			Yes	f		
			1/22/2016			

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

Line Total: \$100.84

4	M304R0.375 ✓	304 ROUND BAR 0.375	1/22/2016	12.00 ✓	\$2.92	\$35.00
			Yes	f		
			1/22/2016			

MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276

(NOTE: AISI 303 NOT ACCEPTABLE)

Line Total: \$35.00

5	M2024T3S.040 ✓	2024-T3 .040 sheet	1/27/2016	48.00 ✓	\$4.83	\$232.00
			Yes	sf		
			1/27/2016			

MATERIAL: 2024-T3 ALUMINUM SHEET
AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037
OR ASTM B209

PO Instructions: PEC ST-887509,
PEC ST-887888,
NOTE: FLAME CUT MATERIAL NOT ACCEPTABLE

Note:

1/19/2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31065**

Purchase Order Date 1/19/2016

PO Print Date 1/19/2016

Page Number 3 of 6

Order From :

VC-COP001

Ship To : DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"
TORONTO, ON M5W 5V8
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 905 669 9444

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Total: \$232.00

6 M2024T3S.063 2024-T3 .063 sheet 1/27/2016
Yes
1/27/2016

96.00 ✓
sf

\$6.29

\$604.00

MATERIAL: 2024-T3 ALUMINUM SHEET
AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037
OR ASTM B209

Line Total: \$604.00

7 M6061T6B0.500X00.125 6061-T6 Bar 0.500 x 0.125 1/22/2016 FN
Yes
1/22/2016

40.00 ✓
f

\$0.88

\$35.00

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR
ASTM B221

Line Total: \$35.00

PO Instructions: PEC ST-887509,
PEC ST-887888,
NOTE: FLAME CUT MATERIAL NOT ACCEPTABLE

Note:

1/19/2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO31065

Purchase Order Date 1/19/2016

PO Print Date 1/19/2016

Page Number 4 of 6

Order From :

VC-COP001

Ship To : DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL "A"
TORONTO, ON M5W 5V8
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

905 669 9444

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

8	M6061T6B1.500X02.500	6061-T6 Bar 1.50 x 2.50	1/22/2016	24.00	✓	\$10.16	\$243.80
			Yes	f			
			1/22/2016				

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR
ASTM B221

Line Total: \$243.80

9	M6061T6B2.000X01.250	6061-T6 Bar 2.00 x 1.25	1/22/2016	12.00	✓	\$6.90	\$82.80
			Yes	f			
			1/22/2016				

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR
ASTM B221

Line Total: \$82.80

PO Instructions: PEC ST-887509,
PEC ST-887888,
NOTE: FLAME CUT MATERIAL NOT ACCEPTABLE

Note:

1/19/2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO31065

Purchase Order Date 1/19/2016

PO Print Date 1/19/2016

Page Number 5 of 6

Order From : VC-COP001
THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"
TORONTO, ON M5W 5V8
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 905 669 9444
Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

10	M6061T6B2.000X04.500	6061T6 Bar 2.00 x 4.500 (cut to 5.00 OR 5.625)	1/22/2016	12.00	\$44.00	\$528.00
		Yes	1/22/2016	f		

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR
ASTM B221

NOTE: CUT TO SIZE 25 PCS @ 5.625" +0.125"/-0.000"

Line Total: \$528.00

11	M6061T6B3.500X8.000	6061-T6 AluminumBar 3.500" X 8.000" (cut to 4.75")	1/22/2016 FN	12.00	\$124.13	\$1,489.50
		Yes	1/22/2016	f		

MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR
ASTM B221

NOTE: CUT TO SIZE 30 PCS @ 4.750" +0.125"/-0.000"

Line Total: \$1,489.50

PO Instructions: PEC ST-887509,
PEC ST-887888,
NOTE: FLAME CUT MATERIAL NOT ACCEPTABLE

Note:



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31065**

Purchase Order Date 1/19/2016

PO Print Date 1/19/2016

Page Number 6 of 6

Order From : VC-COP001
THYSSENKRUPP MATERIALS CA LTD
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"
TORONTO, ON M5W 5V8
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 905 669 9444

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

12	71401-45	PROCUREMENT QUALITY CLAUSES	1/22/2016	1.00	\$0.00	\$0.00
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No

1/22/2016

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

Spoke-01-22

Line Total: \$0.00

PO Total: \$4,161.86

PO Instructions: PEC ST-887509,
PEC ST-887888,
NOTE: FLAME CUT MATERIAL NOT ACCEPTABLE

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr:

2

Change Date:

1/19/2016